



**Carnegie Mellon
Software Engineering Institute**



Human-Computer Interaction Institute

The Future of Software and Software Research : Panel Comments

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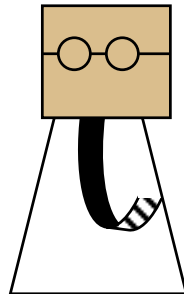
Software New Visions Workshop, April 2001



With apologies to Scott Adams...

**Your specification
includes over four
hundred functions**

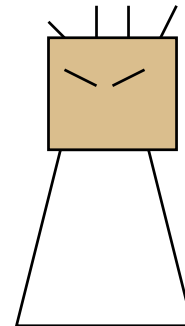
**Don't you realize that no
human will be able to use
a system of such
complexity**



**Right.

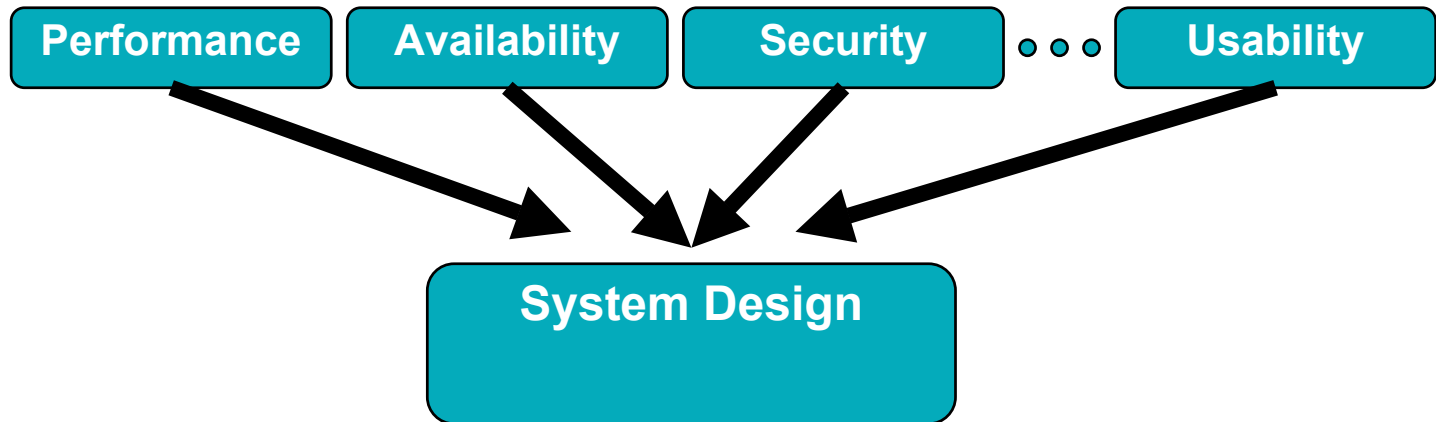
I better add

“Easy to Use”**





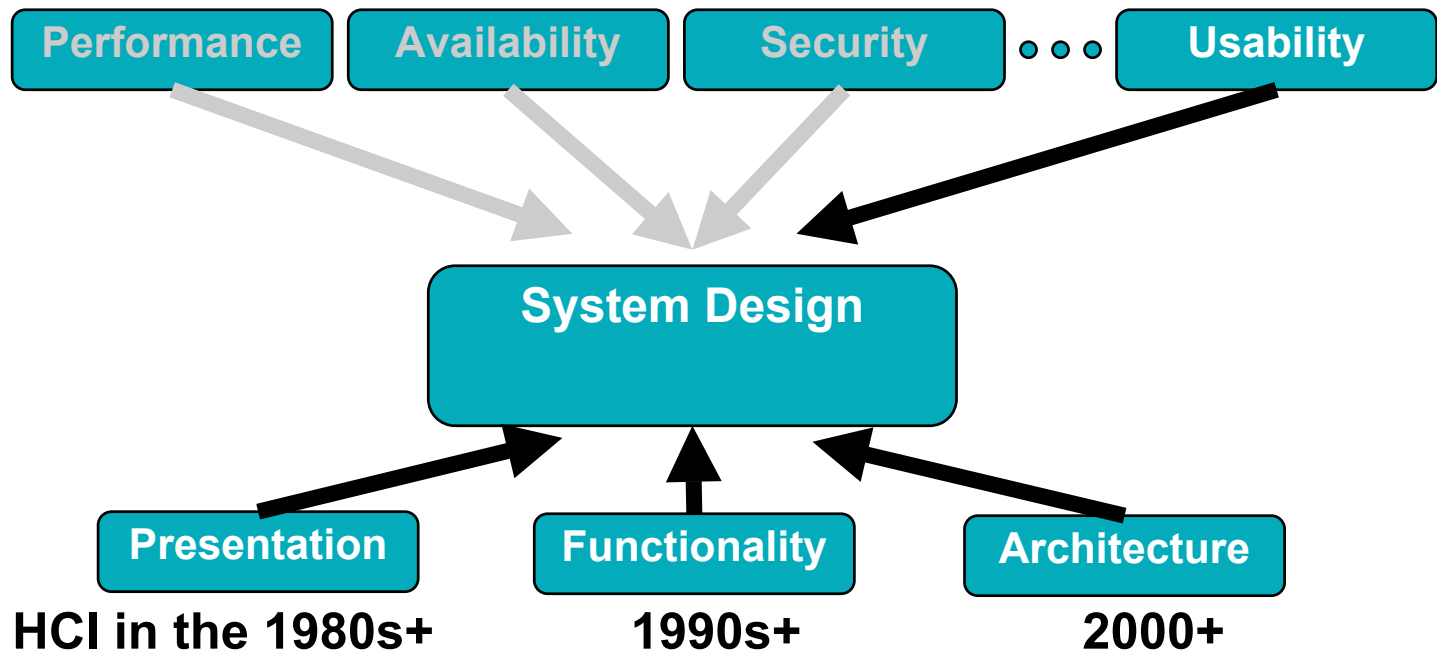
Software Engineering Must Broaden to Include the Human Factor...



**...But Human-Computer Interaction concerns
MUST integrate with SE processes**



HCI is More than Screen Deep





Admitting This Makes SW Design Even Harder

- **SW Engineers are not trained in human behavior**
- **Intuition is wrong**
Expert Blind Spot
- **SMEs don't necessarily make it better**
Expert Blind Spot
- **HCI specialists are not trained in SW Engineering**



Research & Educational Challenges

- **Explicitly integrate HCI current knowledge and processes into SW Engineering processes**
- **Increase understanding of how human concerns effect design at many levels**
- **The points about SW Engineering processes also apply to HCI current processes, so research directions are similar**
- **Evaluate whether the processes developed can actually be used by SW developers**
- **Cross-train key personnel in both SW Engineering and HCI**